

Claims:

1. A drum pedal assembly for effecting rapid, multiple drumbeats from an electronic drum, comprising:

a base plate;

a foot pedal pivotally connected to the base plate, said foot pedal having a top surface and a bottom surface;

a first striker extending below lower surface of the foot pedal;

a second striker extending above the upper surface of the foot pedal;

a first striking surface below the first striker;

a second striking surface above the second striker;

a first transducer for converting an impact induced vibration into an electrical output signal operatively associated with the first striking surface and operatively connected to the electronic drum and a second transducer for converting an impact induced vibration into an electrical output signal operatively associated with the second striking surface and operatively connected to the electronic drum, each said transducer,

wherein depression of the foot pedal by a user causes the first striker to contact the first striking surface to generate an electrical output signal to the drum and release of the foot pedal allows the second striker to contact the second striking surface to generate an electrical output signal to the drum.

2. The drum pedal assembly of claim 1 comprising a biasing element between the base and the pedal.

3. The drum pedal assembly of claim 1 wherein the upper striking surface is a tubular element.

4. The drum pedal assembly of claim 1 wherein the lower striking surface is a tubular element.

5. The drum pedal assembly of claim 3 wherein the second transducer is acoustically connected the tubular element.

6. The drum pedal assembly of claim 4 wherein the first transducer is acoustically connected to the tubular element.

7. The drum pedal assembly of claim 1 wherein the biasing element is a coil spring.

8. The drum pedal assembly of claim 1 further comprising a heel pad affixed to the base, said foot pedal being pivotally connected to said heel pad.

9. The drum pedal assembly of claim 1 wherein said upper striking surface is adjustable whereby a user can adjust a distance between the upper striking surface and the lower striking surface.

10. The drum pedal assembly of claim 1 wherein the foot pedal further comprises a toe stop at a toe end of the foot pedal.

11. The drum pedal assembly of claim 9 further comprising a first vertical support element extending between the base and the upper striking surface and a second vertical support element extending between the base and the upper striking surface, said upper striking surface being adjustable along the vertical dimension of the recited vertical support elements.

12. The drum pedal assembly of claim 11 wherein said first vertical support element and said second vertical support element comprise threaded rods.

13. The drum pedal assembly of claim 12 wherein said upper striking surface is releasably secured to said first and second vertical support elements by a first and second releasable nut assembly.

14. The drum pedal assembly of claim 1 further comprising a shock-absorbing element between the lower striking surface and the base.

15. The drum pedal assembly of claim 1 wherein said first and second transducers is operatively connected to a jack plug.

16. The drum pedal assembly of claim 12 wherein said lower striking surface is adjustable connected to the first and second vertical supports.

17. A drum pedal assembly for use by a drummer to effect drumbeats from an electronic percussion instrument, comprising:

a base for resting on a surface;

a heel pad affixed to the base;

a foot pedal having a toe end and a heel end, said heel end pivotally connected to the heel pad, said toe end including a upper striker and a lower striker;

a biasing element between the pedal and the base;

an upper striking surface positioned above the upper striker, said upper striking surface having a vibration detecting transducer associated therewith;

a lower striking surface spaced apart from the upper striking surface and positioned below the lower striker, said lower striking surface having a vibration detecting transducer y associated therewith;

said recited transducers being operatively connected to the electronic percussion instrument whereby contact by the upper and lower strikers with the upper and lower striking surfaces elicits a drumbeat from the electronic percussion instrument.

18. The drum pedal assembly of claim 17 wherein said upper striking surface comprises a tube.

19. The drum pedal assembly of claim 17 wherein said lower striking surface comprises a tube.

20. The drum pedal assembly of claim 18 wherein said tube is rectangular in cross section.

21. The drum pedal assembly of claim 19 wherein said tube is rectangular in cross section.

22. The drum pedal assembly of claim 17 further comprising a shock absorber between the lower striking surface and the base.

23. The drum pedal assembly of claim 17 wherein the space between the upper striking surface and the lower striking surface is adjustable.

24. A multi-trigger drum pedal assembly for use with an electronic percussion instrument, comprising:

a base for resting engagement on a playing surface, the base having a toe end and a heel end;

a heel pad affixed to the toe end of the base;

a striking surface assembly at the toe end of the base, said striking surface assembly comprising a lower striking surface adjacent the base, a first vertical support having a upper end and a lower end attached to the base, a second vertical support having an upper end and a lower end attached to the base, an upper striking surface attached between the upper end of the first vertical support and the upper end of the second vertical support;

a first electronic percussion instrument actuation trigger operatively attached between the electronic percussion instrument and the upper striking surface and a second electronic percussion instrument actuation trigger operatively attached between the electronic percussion instrument and the lower striking surface

a foot pedal having a toe end and a heel end, said foot pedal being pivotally attached to the heel pad at its heel end with the toe end of the foot pedal positioned between the upper striking surface and the lower striking surface;

a biasing element between the foot pedal and the base;

a striker assembly on the toe end of the foot pedal including an upper striker element and a lower striker element and positioned so that depression of the foot pedal against the biasing element causes the lower striker element to contact the lower striking surface and release of the foot pedal permits the foot pedal to lift causing the upper striker element to contact the upper striking element,

wherein contact by the first striker with the first striking surface generates an electrical output signal from the first trigger to the electronic percussion synthesizer and contact by the second striker with the second striking surface to generate an electrical output signal from the second trigger to the electronic percussion synthesizer, said output signals generating a drum beat.

25. A drum pedal assembly for use by a drummer to effect multiple, rapid drumbeats from an electronic percussion instrument, comprising:

a base for resting on a playing surface, said base having a toe end and a heel end;

a heel pad affixed to the base at the heel end;

a foot pedal having a toe end and a heel end, said heel end pivotally connected to the heel pad, said toe end including an upwardly disposed striker and a downwardly disposed striker;

a biasing spring between the pedal and the base to bias said pedal away from said base;

an upper striking tube positioned above the upwardly disposed striker, said upper striking tube having a transducer mounted inside;

a lower striking tube on the base and positioned below the downwardly disposed striker, said lower striking tube having a transducer mounted inside, said upper striking tube and said lower striking tube defining a drum pedal travel space in-between;

said recited transducers being operatively connected to the electronic percussion instrument whereby by contact by the recited strikers with the recited

striking surfaces elicits a drumbeat from the electronic percussion instrument through the recited transducers.

26. The drum pedal assembly of claim 25 further comprising an adjustment assembly between the upper striking tube and the base, whereby the drum pedal travel space between the upper striking tube and lower striking tube can be adjusted.

27. A bass drum pedal assembly for use by a drummer to effect rapid, multiple drumbeats from an electronic drum comprising:

a frame including a first drum contact electrically wired to an electronic drum and second opposed drum contact electrically wired to an electronic drum,

a biased pedal positioned between the contacts, the pedal having a first pedal contact on an upper surface thereof and second pedal contact on a lower surface said first and second pedal contacts disposed so as to make contact with said first and second drum contacts upon movement of the biased pedal, wherein each contact of a pedal contact with a drum contact closes a circuit, thereby generating an electrical signal to actuate a drum beat from the electronic drum whereby the drummer can effect multiple rapid drum beats by depressing and releasing the biased drum pedal.